==========

Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2008; month=4; day=24; hr=17; min=54; sec=23; ms=85;]

==========

****

Reviewer Comments:

<210> 34

<211> 7

<212> PRT

<213> TNF-alpha light chain

<400> 34

Asp Ile Gln Met Thr Gln Ser
1 5

<210> 35

<211> 8

<212> PRT

<213> TNF-alpha heavy chain

<400> 35

Glu Val Gln Leu Glu Val Asp Ser
1 5

<210> 36

<211> 12

<212> PRT

<213> N-terminal sequence of recombinant TNF-alpha

<400> 36

Asp Glu Ile Val Gln Met Leu Thr Val Gln Asp Ser
1 5 10

The above <213> responses for sequence id#'s 34-36, are invalid.

Please refer to sequence rules formatting for valid <213> responses.
FYI, the above responses can be inserted into section <220> - <223>.
Please make certain to correct any other sequences with similar errors.
****

Validated By CRFValidator v 1.0.3

Application No: 10576068 Version No: 1.0

Input Set:

Output Set:

Started: 2008-04-11 10:28:48.831
Finished: 2008-04-11 10:28:50.410
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 579 ms
Total Warnings: 36
Total Errors: 0
No. of SeqIDs Defined: 36
Actual SeqID Count: 36

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 402	Undefined organism found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

Input Set:

Output Set:

Started: 2008-04-11 10:28:48.831
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Total Errors: 0
No. of SeqIDs Defined: 36
Actual SeqID Count: 36

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (21) This error has occured more than 20 times, will not be displayed
W 402	Undefined organism found in <213> in SEQ ID (24)
W 402	Undefined organism found in <213> in SEQ ID (34)
W 402	Undefined organism found in <213> in SEQ ID (35)
W 402	Undefined organism found in <213> in SEQ ID (36)

SEQUENCE LISTINGS

<110> Hanmi Pharm. Co., Ltd.

<120> EXPRESSION VECTOR FOR SECRETING ANTIBODY FRAGMENT USING E. COLI SIGNAL SEQUENCE AND METHOD FOR MASS-PRODUCING ANTIBODY FRAGMENT

<130> Q94300

<140> 10576068
<141> 2008-04-11

<150> KR1020030072216
<151> 2003-10-16

<150> PCT/KR04/02625
<151> 2004-10-14

<160> 36

<170> KopatentIn 1.71

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<213> Artificial Sequence

<220>
<223> gene fragment of light chain variable region

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ggggacagag tcacc 75

<210> 2
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of light chain variable region

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ggtgactctg tcccctacag 80

<210> 3
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of light chain variable region

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tgcaatcagg ggtcccatct 80

<210> 4
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of light chain variable region

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agatgggacc cctgattgca 80

<210> 5
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
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<400> 5
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caccgtatac ttttggccag 80

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<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of light chain variable region

<400> 6
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<210> 7
<211> 75
<212> DNA

<213> Artificial Sequence

<220>
<223> gene fragment of heavy chain variable region

<400> 7
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aggtccctga gactc 75

<210> 8
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of heavy chain variable region

<400> 8
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gagtctcagg gacctgccg 79

<210> 9
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of heavy chain variable region

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atagtggtca catagactat 80

<210> 10
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of heavy chain variable region

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atagtctatg tgaccactat 80

<210> 11
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of heavy chain variable region

<400> 11
acgccaagaa ctccctgtat ctgcaaatga acagtctgag agctgaggat acggccgtat 60

attactgtgc gaaagtctcg 80

<210> 12
<211> 84
<212> DNA
<213> Artificial Sequence

<220>
<223> gene fragment of heavy chain variable region

<400> 12
cactcgagac ggtgaccagg gtaccttggc cccaatagtc aagggaggac gcggtgctaa 60

ggtacgagac tttcgcacag taat 84

<210> 13
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> RT-PCR forward primer specific for heavy chain

<400> 13
cccaagctta ggcctccacc aagggcccat cggtcttcc 39

<210> 14
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> RT-PCR reverse primer specific for heavy chain

<400> 14
gggggatcct tatgggcacg gtgggcatgt gtgagttttg tcacaaga 48

<210> 15

<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> RT-PCR forward primer specific for light chain

<400> 15
cccaagcttt cgcgaactgt ggctgcacca tctgtcttca tc 42

<210> 16
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> RT-PCR reverse primer specific for light chain

<400> 16
cccggatccc taacactctc ccctgttgaa gctctttgtg ac 42

<210> 17
<211> 69
<212> DNA
<213> modified E. coli thermostable enterotoxin II signal sequence

<400> 17
atgaaaaaga caatcgcatt tcttcttgca tctatgttcg ttttttctat tgctacaaat 60

gcccaggcg 69

<210> 18
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer containing StuI restriction enzyme site

<400> 18
tctattgcta caaatgccca ggccttccca accattccct tatcc 45

<210> 19
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> reverse primer containing StuI restriction enzyme site

<400> 19
agataacgat gtttacgggt ccggaagggt tggtaaggga atagg 45

<210> 20
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
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<400> 20
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<210> 21
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer containing SD sequence and BamHI restriction enzyme site

<400> 21
gggggatcca ggaggtgatt tatgaaaaag acaatcgcat ttc 43

<210> 22
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer containing BpuI restriction enzyme site

<400> 22
ggggctgagc aggaggtgat ttatgaaaaa gacaatcgca tttc 44

<210> 23
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> reverse primer containing BpuI restriction enzyme site

<400> 23
ggggctcagc tcacgcggcg catgtgtgag ttttgtcaca agatttaggc tc 52

<210> 24
<211> 63
<212> DNA
<213> E. coli OmpA signal sequence

<400> 24
atgaaaaaga cagctatcgc gattgcagtg gcactggctg gtttcgctac cgttgcgcaa 60

gct 63

<210> 25
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer specific for heavy chain

<400> 25
gaggttcagc tagtcgagtc aggaggcggt 30

<210> 26
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer containing HindIII and StuI restriction enzyme sites

<400> 26
gggagatctt cacgcggcgc atgtgtgagt tttgtcacaa gatttaggct c 51

<210> 27
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> reverse primer containing stop codon and BamHI restriction enzyme site

<400> 27
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<210> 28
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer containing HindIII and NruI restriction enzyme sites

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<210> 29
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> reverse primer containing stop codon and BamHI restriction enzyme site

<400> 29
ggggtcgaca ggaggtgatt tatgaaaaag acagctatcg c 41

<210> 30
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> reverse primer containing SalI restriction enzyme site

<400> 30
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<210> 31
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer specific for modified E. coli enterotoxin II signal peptide and containing NdeI restriction enzyme site

<400> 31
gggcatatga aaaagacaat cgcatttctt cttgcatcta tg 42

<210> 32
<211> 705
<212> DNA
<213> Artificial Sequence

<220>
<223> TNF-alpha heavy chain

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ccagggaagg gcctggaatg ggtctcagct atcacttgga atagtggtca catagactat 180

gcggactctg tggagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240

ctgcaaatga acagtctgag agctgaggat acggccgtat attactgtgc gaaagtctcg 300

taccttagca ccgcgtcctc ccttgactat tggggccaag gtaccctggt caccgtctcg 360

agtgcctcca ccaagggccc atcggtcttc cccctggcac cctcctccaa gagcacctct 420

gggggcacag cggccctggg ctgcctggtc aaggactact tccccgaacc ggtgacggtg 480

tcgtggaact caggcgccct gaccagcggc gtgcacacct tcccggctgt cctacagtcc 540

tcaggactct actccctcag cagcgtggtg accgtgccct ccagcagctt gggcacccag 600

acctacatct gcaacgtgaa tcacaagccc agcaacacca aggtggacaa gaaagttgag 660

cccaaatctt gtgacaaaac tcacacatgc ccaccgtgcc catag 705

<210> 33
<211> 645
<212> DNA
<213> Artificial Sequence

<220>
<223> TNF-alpha light chain

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atcacttgtc gggcaagtca gggcatcaga aattacttag cctggtatca gcaaaaacca 120

gggaaagccc ctaagctcct gatctatgct gcatccactt tgcaatcagg ggtcccatct 180

cggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag cctacagcct 240

gaagatgttg caacttatta ctgtcaaagg tataaccgtg caccgtatac ttttggccag 300

gggaccaagg tggaaatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcca 360

tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420

cccagagagg ccaaagtaca gtggaaggtg gataacgccc tccaatcggg taactcccag 480

gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600

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<210> 34
<211> 7
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<400> 34
Asp Ile Gln Met Thr Gln Ser
  1   5

<210> 35
<211> 8
<212> PRT
<213> TNF-alpha heavy chain

<400> 35
Glu Val Gln Leu Glu Val Asp Ser
  1   5

<210> 36
<211> 12
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<213> N-terminal sequence of recombinant TNF-alpha

<400> 36
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